take place of the purgative plan, so much at present in medical fashion. It is a means of depletion much less indirect and circuitous, more speedy in its operation, more under command, and, on the whole, less debilitating.

In these climates, Mercury has been made use of principally as *an evacuant* medicine, in the form of calomel combined with jalap, scammony, or aloes, and Dr. Thomy in this treatise seems to follow in his methods of cure the formula of Dr. Hamilton in his essay on purgatives which has recommended, with such effect, the evacuant plan of cure, in many diseases where the stimulating course had been before adopted, and which has done much in turning the tide that now so strongly sets against the Brunonian practise. The era of infatuation is now nearly past when one hundred drops of Tinct. Opii in a glass of spirits was deemed the grand arcanum vitæ, elixir salutis, (though in reality only taking place of the ancient theriacas, and mithridates in a liquid form) when the sick room was turned into a wine and often a spirit cellar; when a cool regimen externally, was accompanied with the most ardent internal medicines; when apoplexy was treated only by stimulants, as a disease of debility, and the lancet prohibited entirely even in the most notorious congestions; when catarrh by the continuance of severe cold was often changed into pneumonic inflammation, and incipient pthisis, instead of frequent and moderate venesection, was managed by beef stake and brandy; the time is almost over, when this Boutefeu of Physic, the Burke of the medical world, fascinated by his decisive tone, the young and often the more experienced practitioners We honestly aver that we are much more disposed to be disciples of Doctor Sangrado, than of Doctor Brown.

It continues to be, as it has been, our firm belief, that the lancet, the first of evacuant remedies, has been too seldom used, not only in the first stages of fever, but in many other diseases, in many varieties of dropsy, in diabetes (as lately ascertained by Watt) in Hydrocephalus, and particularly in that insidious, and disguised catarrhal affection, which generally precedes the constitutional pulmonary consumption. We may also safely assert, that morbid fever never can be repressed successfully but by the means of an evacuation, and it is, we again observe, by sagaciously noting the different terminations of diseases made by nature, adopting her more favourable ones, at an *early season of the disease*, thus superseding one affection, by another comparatively milder, by a new action produced or by means of appropriate medicines, and principally those of *depletion*. It is by this method, that we, by art, anticipate nature, make the materia medica operate as vires medicatrices, and thus play with the Esculapian serpent, after having robbed it of its fangs, and its poison. Homo, naturæ minister et interpres, tantum facit et intelligit quantum de naturæ ordine, re vel mente observaverit, NEC AMPLIUS SCIT AUT POTEST. BACON. X.

DISCOVERIES AND IMPROVEMENTS IN ARTS, MANUFACTURES, &c.

Patent of Mr. John Slater of Birmingham: for an Improvement in Hanging and Securing Grind-stones.

Dated Feb. 1810.

MR. SLATER describes his method of hanging grind-stones in the following manner.

I cause each grind stone to be hung through its center upon a spindle in the customary manner, tight wedging excepted; I then place on each side of the grind-stone a flat piece or a washer, of wood or other substance of a soft or yielding nature, which must extend in a circle from the spindle hole in the grind stone to any degree or part of its diameter, as may be found most convenient, to form a bed or equal bearing upon wood or washer, before mentioned.

I place on each side of the grind-stone a flat ring of iron, or other metal, wrought or cast, about half an inch thick. To each ring I add a strong gripe, or bracing piece with screws, formed of a strong circular plate of iron, or other metal, corresponding in diameter with the rings before described. Each griping piece must have a hole in its center, of a proper size and figure to admit the spindle of the grind-stone. And also as near as convenient to and round the circular edges of each griper or bracing piece, I cause holes to be made at small distances, of a proper size and form to receive or admit screwed nuts or burs fitted and screwed to them so as to hold and admit of strong screw pins or bolts, which must be made to screw pointedly, or in a direct manner towards the before described rings and grind-stone. The bracing pieces may be made occasionally without the nuts, as their necessity depends upon those plates being made of cast iron. The gripes or bracing plates being made, I then place them upon the rings, one at each side of the grind-stone, the spindle of the said grindstone passing through them all, which are then to be secured completely tight and firm to their places by cotters through, or screws fixed to, the spindle of the grindstone, on the outside of the whole griping or bracing pieces on or against the rings or washers, so as to press, and hold the grind-stone between the apparatus on both its sides.

Patent of Mr. Benjamin Flight, of St. Martins Lane, Westminster, Organ Builder for a Metal Nave, Axle, and Box for Wheel carriages.
Dated Sept. 1809.

In this method of securing wheels to the axles, the axle is made hollow for a certain distance at each end, into which hollow part a large pin enters, having a projected head, which keeps the metal nave from being forced off: at its other end this pin has a groove turned on it, in which a cap is made to fit so as that the pin turns round freely with it, and which cap is divided longitudinally, that it may be put on or taken off when desired; when the cap and pin are in their places within the hollow axle, a bolt passing vertically through the hollow axle and cap keeps the pin from being drawn out, and thereby prevents the wheel from working off. The pin itself is made hollow for the purpose of containing oil; which is put into it by an aperture at the center of its head, and secured from coming out by a screw that fits tight into this aperture; a small hole is drilled through the side of the pin into the oil box through which the oil passes between the pin and axle, the pin being fastened to the nave so as to turn round with it, and the oil being consequently required inside as well as outside the axle.

Observation...There does not seem to be any advantage in the pin being made to turn round with the nave, to counterbalance the disadvantage that must arise from the additional friction which this will occasion, and for the expense of the divided caps and their fitting which this mode of construction makes necessary. If the pin did not turn round, the bolt might pass through its end at once, which would be much simpler. Making the pin of size sufficient to contain an oil box would render it necessary to make the axle of a large size, in order to be sufficiently strong, but it is not certain that this would be so disadvantageous as it might appear, as the friction depends more on the weight of the carriage than on the extent of surface of the axle.

Mr Davy's Discoveries relative to Muriatic Acid.

Phil. Mag. 36, 152.

The conclusions drawn by Mr. Davy from the series of facts contained in the valuable paper which he read before the Royal Society (and of which an account was given in our last number) are highly deserving of attention, and are as follows:

1st. The oxymuriatic acid is, (as far as our knowledge extends) a *simple substance*, which may be classed in the same order of natural bodies as oxigen gas; being determined like oxigen to the positive surface in Voltaic combinations, and like oxigen,